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EXAMINER

KIM, CHONG HWA

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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3682

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/992,597

Applicant(s)

OSE, KENJI

Examiner

Chong H. Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 34-37, 40, 41, 43-47, 49-55, 61-65, 73 and 74 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 34-37, 40, 41, 43-47, 49, 55, 61-65, 73 and 74 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 34-37, 43-47, 49-52, 73, and 74 are rejected under 35 U.S.C. 102(b) as being anticipated by Higuchi, WO 92/19488.

Higuchi shows, in Figs. 1-6, a bicycle shift control device comprising;

a base member 6b;

an attachment band 6a extending from the base member, wherein the attachment band is structured to surround a handlebar and has a substantially cylindrical shape;

a rotatable dial 9 coupled to the base member for rotation coaxially around a rotational axis, wherein the rotatable dial is exposed to the outside;

wherein the rotatable dial is not structured to surround a handlebar so as to rotate coaxially around the handlebar;

a motion limiting structure 22 coupled to the base member and to the rotatable dial that limits a range of rotation of the rotatable dial relative the base member to a predefined arc in at least one of a clockwise and a counterclockwise direction, wherein the rotatable dial moves unobstructively within the predefined arc between a cable pulled position and a cable released position;

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a finger contact projection 8 extending from the rotatable dial in a direction of the rotational axis;

wherein the finger contact projection is structured to prohibit the extension of a finger between all portions of the finger contact projection and the rotatable dial;

wherein the finger contact projection is structured that the shift control device can be operated by placing two fingers or a finger and a thumb on opposite sides of the finger contact projection such that the rotational axis is sandwiched between and adjacent the two fingers or the finger and the thumb;

wherein the finger contact projection protrudes radially inwardly from a radially innermost outer peripheral surface of the dial so that the shift control device can be operated by grasping the finger contact projection with the two fingers radially inwardly from the radially innermost outer peripheral surface;

wherein the finger contact projection extends in close proximity to the rotational axis;

a shift element coupler 12 disposed with the rotatable dial;

wherein the finger contact projection is coupled to the rotatable dial so that rotation of the finger contact projection correspondingly rotates the rotatable dial to move the shift element coupler and thereby operate the shift control device;

wherein the finger contact projection extends at least partially in a direction perpendicular to the rotational axis;

wherein at least one of the dial and the base member includes a coupling projection 7 for coupling the dial to the base member;

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wherein the coupling projection is disposed on the dial and extends into an opening in the base member;

wherein the attachment band includes a first mounting hole that aligns with a second mounting hole (as shown in Fig. 1);

wherein the shift element coupler is attached to the rotatable dial;

wherein the shift element coupler is fitted within a coupler bore formed in the rotatable dial;

wherein the shift element coupler includes cable end bead receiving opening 13;

wherein the shift element coupler has a substantially cylindrical shape, and wherein the cable end bead receiving opening extends diametrically through the shift element coupler;

wherein the motion limiting structure comprises a motion stop 22 that cooperates with a first limit stop and a second limit stop (as described in the Abstract);

wherein the motion stop extends from the base member;

wherein the first limit stop and the second limit stop are disposed on the rotatable dial;

wherein the rotatable dial includes a motion limiting groove 23 that forms the first limit stop and the second limit stop (as described in the Abstract); and

wherein the attachment band has a substantially cylindrical shape.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 34-37, 40, 41, 44, 49-51, 53, 61-65, 73, and 74 are rejected under 35 U.S.C.

103(a) as being unpatentable over Wechsler, U.S. Patent 3,965,763 in view of Higuchi, WO 92/19488 and in view Knop, U.S. Patent 3,766,793.

Wechsler shows, in Figs. 1-3, a bicycle shift control device comprising;

a base member 33;

an attachment band (the vertically extended band that partially surrounds the handle 11 as shown in Fig. 4) extending from the base member;

a rotatable dial 22 coupled to the base member 33 for rotation coaxially around a rotational axis (bolt 34), wherein the rotatable dial is exposed to the outside;

wherein the rotatable dial is not structured to surround a handlebar so as to rotate coaxially around the handlebar;

a motion limiting structure 37, 38 coupled to the base member and to the rotatable dial that limits a range of rotation of the rotatable dial relative the base member to a predefined arc in at least one of a clockwise and a counterclockwise direction, wherein the rotatable dial moves unobstructively within the predefined arc between a cable pulled position and a cable released position;

a finger contact projection 32 extending from the rotatable dial in a direction of the rotational axis;

wherein the finger contact projection is structured to prohibit the extension of a finger between all portions of the finger contact projection and the rotatable dial;

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wherein the finger contact projection is structured such that the shift control device can be operated by placing two fingers or a finger and a thumb on opposite sides of the finger contact projection such that the rotational axis is sandwiched between and adjacent the two fingers or the finger and the thumb;

wherein the finger contact projection extends in close proximity to the rotational axis;

a shift element coupler disposed with the rotatable dial (column 4, lines 46-50);

wherein the finger contact projection is coupled to the rotatable dial so that rotation of the finger contact projection correspondingly rotates the rotatable dial to move the shift element coupler and thereby operate the shift control device;

wherein the finger contact projection extends at least partially in a direction perpendicular to the rotational axis;

wherein at least one of the dial and the base member includes a coupling projection 34 for coupling the dial to the base member;

wherein the coupling projection 34 is disposed on the dial and extends into an opening in the base member (see Fig. 4);

wherein the rotatable dial and the finger contact projection are one piece;

wherein the base member includes a cable guide having a cable guide opening for receiving a cable therethrough;

an attachment band extending from the base member 33;

wherein the motion limiting structure comprises a motion stop 38 that cooperates with a first limit stop (gear position number 1) and a second limit stop (gear position number 10);

wherein the motion stop 38 extends from the base member; and

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wherein the first limit stop and the second limit stop are disposed on the rotatable dial;

but fails to show an attachment band in a cylindrical shape that surrounds a handlebar; the finger contact projection protrudes radially inwardly from a radially innermost outer peripheral surface so that the shift control device is operated by grasping the finger contact projection with the two fingers radially inwardly from the radially innermost outer peripheral surface; two finger contact surface that faces in the perpendicular direction to the rotational axis and forms a continuous surface with the dial; and the projection extending across substantially an entire diameter, through the rotational axis, and perpendicular to the surface or outer portion of the dial towards the rotational axis of the dial.

As to the matter of the attachment band, Higuchi shows, in Fig. 2, a bicycle shift control device comprising an attachment band 6a extending from a base member 6b, wherein the attachment band is structured to surround a handlebar 1 and has a substantially cylindrical shape.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the cumbersome attachment band of Wechsler with the handlebar surrounding attachment band as taught by Higuchi in order to provide a simpler and an easier method of attaching the shift control device on a bicycle so that a cost of manufacturing can be reduced.

As to the matter of finger contact projection, Knop shows, in Fig. 1, a gear shift control device 10 comprising a base 22; a rotatable dial 10 coupled to the base member for rotation coaxially around a rotation axis 14, wherein the rotatable dial is exposed to the outside; a finger contact projection 16 extending from the rotatable dial in a direction of the rotational axis; wherein the finger contact projection is structured to prohibit the extension of a finger between

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all portions of the finger contact projection and the rotatable dial; wherein the finger contact projection extends in close proximity to the rotational axis; a shift element coupler 24 disposed with the rotatable dial; wherein the finger contact projection protrudes radially inwardly from a radially innermost outer peripheral surface so that the shift control device is operated by grasping the finger contact projection with the two fingers radially inwardly from the radially innermost outer peripheral surface; wherein the two finger contact surface that faces in the perpendicular direction to the rotational axis and forms a continuous surface with the dial; wherein the finger contact projection extends across substantially an entire diameter of the dial; wherein the finger contact projection extends through the rotational axis; wherein the finger contact projection extends diametrically across substantially an entire diameter of the dial; wherein the finger contact projection extends from a surface of the dial that is generally perpendicular to the rotational axis; and wherein the finger contact projection extends from an outer portion of the dial towards the rotational axis.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the dial of Weschler with the dial having the vertically extending finger contact projection as taught by Knop in order to provide a more ergonomic knob that can be turned with more ease.

5. Claims 54 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wechsler in view of Higuchi as applied to claims 34, 36, and 37 above, and further in view of White et al., U.S. Patent 3,398,600.

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Wechsler in view of Higuchi shows, as discussed above in the rejections of claims 34, 36, and 37, the bicycle shift control device comprising the coupling projection extending into the opening in the base member, but fails to show the coupling projection includes a slot and a locking abutment.

White et al. shows, in Figs. 4 and 5, a rotatable dial 26 comprising a coupling projection 22 having a slot 34 that allows the coupling projection to be compressed and wherein the coupling projection includes a locking abutment 40 facing the rotatable dial 26 for locking the rotatable dial to the base member.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the coupling projection of Wechsler with the snap-in coupling projection as taught by White et al. in order to provide a simpler design wherein the tolerances between the projection and the receiving end need not be accurately controlled, as described in column 2, lines 1-2 of White et al. so that the cost of manufacturing can be reduced.

Response to Arguments

6. In response to the applicant's argument that Higuchi fail to show the rotational axis being sandwiched between the thumb and index finger, it is the Examiner's view that such gripping method can be done to operate the gear shifter of Higuchi. There are numerous ways for an operator to rotate the shifter. One may use only one finger, or two fingers, or even all of the fingers according to one's preference. Furthermore, in Higuchi case, it is possible to use the thumb and the index fingers to wrap around the dial portion 9 and engage the thumb on one side

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of the finger contact projection 8 and the index finger on the other side of the projection 8, thus positioning the rotational axis sandwiched between the two fingers.


7. Applicant's arguments with respect to Weschler have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chong H. Kim whose telephone number is (571) 272-7108. The examiner can normally be reached on Tuesday - Friday, 7:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Bucci can be reached on (571) 272-7099. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

chk
June 22, 2005


CHONG H. KIM
PRIMARY EXAMINER